

July 3, 1985

TO: Memo to File

FROM: Steve Cox<sup>sc</sup> and Lynn Kunzler, Reclamation Biologists

RE: Determination of Revegetation Success for Surety Release,  
Utah International, Inc., Cedar City Operation,  
ACT/021/001, Iron County, Utah

On June 13, 1985, Division Biologists Lynn Kunzler and Steve Cox visited Utah International's Cedar City Operation, they were accompanied by Sterling Grogan, Frank Metcalf and York Jones of Utah International. The purpose of the visit was to conduct vegetation sampling on the last two reclaimed areas, the Zelma Site and tailings pond. These areas were not eligible for sampling last year due to the three year time requirements under Rule M-10(12)(2)(b) (See memo to file dated July 10, 1984).

In addition, the areas not satisfying that requirements of Rule M-10 last year were visually reevaluated. One area, the Blackbird had achieved sufficient success to warrant resampling.

On each of the three areas, ten random transects of 25-30 meters were laid out. At each one meter interval a hit on vegetation, bare ground, litter, or rock was recorded hits were totaled to produce a total vegetation cover value, a weed cover value and an acceptable cover value (only plants favorable for reclamation) for each transect. The result of the sampling are shown on Table 1. Following is a discussion of each area sampled and also those visually reevaluated.

Tailings Pond:

This area covers approximately 80 acres and was reseeded in 1982. The majority of the site is covered by tamarisk (Tamarix pentadra) and foxtail Barley (Hordeum Jubatum). Crested wheatgrass (Agropyron Cristatum) and willow (salix sp) are also fairly common. Vegetation cover of suitable species totaled 20% percent and was fairly evenly distributed over most of the site. One problem area was noted. It is approximately 5 to 10 acres in size and is located on the north and east rims of the pond. This area is apparently compacted to the point that reseeding has not been successful and reenvasion from surrounding vegetation has not occurred.

It is determined that 70 acres of the site should be released and the remaining ten acres revegetated. Mr. Jones agreed to provide a more detailed map showing the acreage which needs to be reworked.

#### Zelma Site

This area consists of small pit areas which have been filled and recontoured and the access road which together cover seven acres. This site was reseeded in fall of 1981. Total acceptable vegetation cover was 14.4 percent. The site had a high diversity of grasses forbs and shrubs including Rubber rabbit brush, Broom snakeweed, bitterbrush, indian ricegrass, crested wheatgrass, three awn grass, globemallow, and evening primrose. The site also has a fairly heavy cover of Horehound which is considered a weed but valuable as a successional plant to control erosion.

This area is located within the Upland Story Hills (P-J) Range Site which typically has 20% cover (MRP, 1977). Vegetation cover has reached the 70% cover required by Rule M-10, and is evenly distributed. The site has been successfully reclaimed.

#### Blackbird Site

The site was sampled in 1984 and did not meet the requirements of Rule M-10. Vegetation cover at that time was only 10.7 percent. The low cover value was attributed to primarily heavy grazing pressure. This site was reevaluated due to the fact that grazing had not occurred and a good growth of grass was present.

Vegetation cover totaled 19.6 percent. This is well over the cover value of 14% which needs to be achieved for bond release. Vegetation was fairly evenly distributed. This site has been successfully reclaimed.

The following sites were visually reevaluated in order to determine those areas which need additional revegetation work.

#### Low Grade Stockpiles No. 14 and No. 15

Approximately two acres of the 5-6 acres on Low Grade No. 15 are not successfully revegetating. On L. G. No. 14, approx. 7 acres on the east side of the haul road need to be reworked. Problems appear to be primarily due to compaction. The operator has agreed to revegetate this problem areas. The additional five acres associated with these areas appears to be successfully revegetating.

#### L. G. #18

It was agreed that the total six acres at this site should receive additional work to eliminate compaction and reseed.

9

Smith No. 5

The haul road and stockpiles need additional work. This totals approximately 6-7 of the 8 acres of disturbance.

Walker Iron Placer

Vegetation at this site was very sparse. An attempt will be made to rework the slopes with a dozer to make small depressions to hold water for vegetation and reduce erosion.

cc: York Jones  
Pam Grubaugh-Littig

TABLE 1

		AREA	
	<u>Tailings Pond</u>	<u>Zelma</u>	<u>Blackbird</u>
% Total Cover	24	24.8	28.4
% Weed Cover	4	10.4	8.8
% Acceptable Cover	20	14.4	19.6
Meets success Criteria Level (14%) for Bond Release	Yes	Yes	Yes
Sample Size	10	10	10
Number of Points/Transect	30	25	25